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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,067	06/24/2003	Katsuyoshi Hiraki	1324.68111	8618

7590 03/05/2007
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EXAMINER

SHANKAR, VIJAY

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/603,067	Applicant(s) HIRAKI ET AL.	
	Examiner VIJAY SHANKAR	Art Unit 2629	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 12/4/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 27-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-8,11-14,16,17,20,21,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 3,4,9,10,15,18,19,22,25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 16-19 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-2, 5-8, 11-14, 16-17, 20-21, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino et al (5,398,040) in view of Robinson, Jr. (4,128,846).

Regarding Claims 1,7, 13,16,20,23, Ogino et al teaches a driving method of a liquid crystal display device, comprising: a detection step of detecting a vertical scanning frequency or a horizontal scanning frequency (Figures 1-6; Summary; Column 2, line 3- Col. 3, line 56; Column 3, line 60- Col.5, line 49); and an output step of outputting, according to the vertical scanning frequency or the horizontal scanning frequency is detected at the detection step (Column 3, line 60- Col.5, line 49), a gate-on voltage or a common voltage corresponding to of the change. (Figures 1-6; Column 2, line 3- Col. 3, line 56; Column 3, line 60- Col.5, line 49).

However, Ogino et al does not teach detecting a change of a vertical scanning frequency or a horizontal scanning frequency ; and an output step of outputting, according to the change of the vertical scanning frequency or the horizontal scanning frequency is detected at the detection step, a gate-on voltage or a common voltage corresponding to a magnitude of the change.

Robinson et al teaches a driving method comprising detecting a change of a vertical scanning frequency or a horizontal scanning frequency (Figs. 5A-5E; Column 7, line 28- Column 9, line 17); and an output step of outputting, according to the change of the vertical scanning frequency or the horizontal scanning frequency is detected at the detection step (Column 4, line 13- Column 6, line 31; Column 7, line 28- Column 9, line

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17), a gate-on voltage or a common voltage corresponding to a magnitude of the change (Column 4, line 15-68). (Also, see Figs.2-3, 5A-5E; Column 4, line 13- Column 6, line 31; Column 7, line 28- Column 9, line 17).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Robinson et al into Ogino et al for providing better quality display.

Regarding Claims 2,8,14,17,21,24, Ogino et al teaches a driving method of a liquid crystal display device wherein at the detection step, it is judged whether the vertical scanning frequency or the horizontal scanning frequency exceeds a predetermined threshold value. (Figures 2,6; Column 5, line 8-35).

Regarding Claim 5, Ogino et al teaches a driving method of a liquid crystal display device wherein at the output step, the gate-on voltage is generated in accordance with the change of the vertical scanning frequency or the horizontal scanning frequency. (Figures 1-6; Column 2, line 3- Col. 3, line 66; Col.5, line 1-49).

Regarding Claims 6 and 11-12, Ogino et al teaches a driving method of a liquid crystal display device further comprising a step of, when the change of the vertical scanning frequency or the horizontal scanning frequency is detected at the detection step, outputting a common voltage corresponding to the detected change.

(Figures 1-6; Summary; Column 2, line 3- Col. 3, line 66; Col.5, line 1-49).

Allowable Subject Matter

5. Claims 3-4, 9-10, 15, 18, 19, 22, 25-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is an examiner's statement of reasons for allowance: The prior arts fails to teach a driving method of a liquid crystal display device wherein at the output step, when it is judged at the detection step that the vertical scanning frequency or the horizontal scanning frequency exceeds the predetermined threshold value, a high gate-on voltage as compared with a case where the vertical scanning frequency or the horizontal scanning frequency is the predetermined threshold value or lower is outputted as claimed in Claim 3.

The prior arts fails to teach a driving method of a liquid crystal display device wherein at the detection step, it is judged whether the vertical scanning frequency or the horizontal scanning frequency exceeds a first threshold value, and when it is judged that the vertical scanning frequency or the horizontal scanning frequency exceeds the first threshold value, it is judged whether the vertical scanning frequency or the horizontal scanning frequency falls below a second threshold value as claimed in Claim 4.

The prior arts fails to teach a drive control circuit of a liquid crystal display device wherein the detection circuit comprises: a first judgment circuit for judging whether the ambient temperature exceeds a first threshold value; and a second judgment circuit for judging, when it is judged that the ambient temperature exceeds the first threshold value, whether the ambient temperature falls below a second threshold value as claimed in Claim 25.

The prior arts fails to teach a drive control circuit of a liquid crystal display device wherein the output circuit outputs a first common voltage when the first judgment circuit judges that the ambient temperature exceeds the first threshold value, and outputs a second common voltage lower than the first common voltage when the second judgment circuit judges that the ambient temperature falls below the second threshold value as claimed in Claim 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Applicant's arguments with respect to Claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

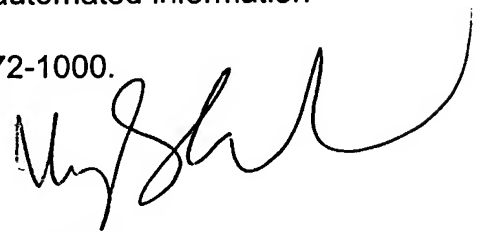
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIJAY SHANKAR whose telephone number is (571) 272-7682. The examiner can normally be reached on M-F 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BIPIN SHALWALA can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



VIJAY SHANKAR
Primary Examiner
Art Unit 2629

VS